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Brief report: Personality correlates of susceptibility to peer influence in adolescence

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Abstract

Adolescents show a heightened susceptibility to peer influence compared to adults. Individual differences in this susceptibility exist, yet there has been little effort to link these with broader personality processes. Reward sensitivity and impulsive behaviour are also heightened in adolescence and could affect the tendency to be influenced by peers. This study examined associations between self-reported resistance to peer influence, facets of reward sensitivity and impulsivity, and subjective social status in a sample of 269 British sixth form students (mean age 16.79). Multiple regression analyses showed that negative and positive urgency were significantly associated with resistance to peer influence. The relationship between negative urgency and resistance was moderated by subjective social status, such that individuals reporting low status showed a stronger negative relationship. Results suggest that a susceptibility to peer influence is linked with a tendency to act impulsively when in heightened emotional states. Adolescents high in negative urgency who feel lower in their social hierarchy may be particularly vulnerable.

Keywords: Peer influence; impulsivity; reward sensitivity; urgency.

Introduction

Affiliating with peers becomes particularly important during adolescence, yet the ability to resist peer pressure is not fully developed until around age 18 (Spear, 2000, Steinberg & Monahan, 2007). Individual variation is observed in this normative pattern, and a lower resistance to peer influence may propel individuals into risk-taking or antisocial behaviour that they might otherwise not engage in (Allen, Porter, & McFarland, 2006). It is not yet clear why some adolescents develop a stronger resistance to peer influence than others.

Adolescence is also a period of elevated reward sensitivity and immature impulse restraint (Casey, Jones, & Hare, 2008; Galvan et al., 2006), possibly due to the early development of neural regions responsible for socioemotional processing in comparison with those responsible for cognitive control (Steinberg, 2010). These psychological characteristics also show individual differences, reflected in scores on personality trait measures (Harden & Tucker-Drob, 2011), and may influence susceptibility to peer influence. Adolescents with an increased sensitivity to reward might value peer acceptance especially highly, whilst those with low impulse control may be less able to regulate their behaviour when faced with peer pressure.

There has been little research into the relationships between responses to peer influence and traits reflecting reward sensitivity and impulsivity. One study that examined resistance to peer influence alongside a broad measure of impulsivity, the Barratt Impulsiveness Scale (Patton, Stanford, & Barratt, 1995), found a modest, negative association (Steinberg & Monahan, 2007). However, consensus is growing that impulsivity is best conceived as multiple discrete traits, reflecting deficits in conscientiousness (lack of premeditation and perseverance), tendencies to act impulsively when in depressed or euphoric moods (negative and positive urgency), and sensation seeking (Cyders & Smith, 2008; Smith et al., 2007; Whiteside & Lynam, 2001). Analysing resistance to peer influence alongside separate impulsivity-related traits may help to clarify the distinct processes underlying susceptibility. For instance, is low resistance related to a reduced ability to think about the consequences of one's actions, or the result of being less able to regulate behaviour under extreme emotion? This study aims to utilise recent developments from the individual differences literature to address this question.

Relationships between personality traits and resistance to peer influence may be affected by social context. Social exclusion weakens self-regulation (Baumeister, DeWall, Ciarocco,

& Twenge, 2005), and leads to increased risk-taking in individuals low in resistance to peer influence (Peake, Dishion, Stormshak, Moore, & Pfeifer, 2013). Adolescents who feel that they have low social status and are highly reward sensitive may be more inclined to acquiesce to their peers in order to gain social rewards such as peer approval, whilst low status, impulsive individuals may have limited regulatory resources to resist their peers. These relationships have not been previously tested. In this study subjective social status will be tested as a moderator of relationships between traits and resistance to peer influence.

Method

Participants and procedure

Data were collected as part of a prospective study examining risk factors for adolescent substance use. Participants were 269 sixth form students from two schools in east London, United Kingdom. Two additional participants were excluded due to incomplete data. Representatives of these schools responded to email requests for participation sent to 20 schools in the London area. The sample was 73% female and ranged in age from 16-18 (M = 16.79 (SD = .54). This gender ratio is representative of humanities subjects in UK sixth forms (Department for Education and Skills, 2007). Data regarding individual ethnicity and socioeconomic status were not collected. Reports of the schools' entire student body note that 80% of students from school 1 and 50% from school 2 are from minority ethnic groups. The majority of participants (n = 228) were recruited from school 1.

The study was approved by the Goldsmiths Psychology Department Ethics Committee. A passive consent procedure was used whereby participants' parents/guardians were informed about the study and given the option to exclude their children from participation. Questionnaires were administered in groups of around 20 during class time under test conditions with the researcher and a teacher present. Participants gave written assent prior to completing the questionnaires.

Measures

Reward sensitivity

The Behavioural Activation System scales (Carver & White, 1994) assess three aspects of reward related behaviour: drive, fun seeking, and reward responsiveness. Items are

measured on a four point Likert-type scale. The scales have been found to be applicable to adolescents (Cooper, Gomez, & Aucote, 2007). Reliability coefficients, estimated using Cronbach's alpha, were: drive = .74, fun seeking = .71, reward responsiveness = .62

Impulsivity

The UPPS-P Impulsive Behaviour Scale (Cyders et al. 2007; Whiteside & Lynam, 2001) is a 59 item measure assessing five facets of impulsivity. Items are measured on a four point Likert-type scale. The scale shows good validity characteristics (Cyders et al. 2007; Smith et al., 2007). Scores were coded so that higher values reflect higher impulsivity. Reliability coefficients in this sample were: lack of premeditation = .84, lack of perseverance = .77, sensation seeking = .86, negative urgency = .83, positive urgency = .90.

Subjective social status

Status was assessed using adapted versions of the MacArthur scales of subjective social status (Goodman et al., 2001; Sweeting, West, Young, & Kelly, 2011). Participants were shown six 10-rung ladders representing social standing, three in reference to their friendship group and three to their school year group. They were asked to mark the rung which best reflected how popular, powerful, and respected they felt compared to others in these reference groups. Scores on the six items were summed and averaged for a continuous score. The reliability coefficient was .87.

Resistance to peer influence

The Resistance to Peer Influence scale (Steinberg & Monahan, 2007) assesses levels of resistance in neutral situations. Participants are presented with 10 pairs of statements that describe types of people. For each pair, one statement reflects people who are resistant to peer influence, and the other reflects those who are susceptible. Participants indicate which of each pair best reflects themselves, and then whether this is 'sort of true' or 'really true'. The scale was modified in this study due to time considerations. Participants were asked to select the statements reflecting themselves but did not indicate the degree to which this statement was true. One point was scored for each resistant statement. The reliability coefficient was .73.

Results

Descriptive statistics and bivariate correlations are presented in Table 1. Resistance to peer influence was significantly negatively correlated with drive, fun seeking, negative urgency, and positive urgency. Subjective social status was significantly positively associated with drive, fun seeking, and sensation seeking, and significantly negatively associated with lack of perseverance.

Two hierarchical multiple regressions were conducted with resistance to peer influence scores as the criterion variable (Table 2). Negative and positive urgency were analysed in separate models due to their high intercorrelation. Gender and subjective social status were entered at step one, personality traits scores that showed significant correlations with resistance were entered at step two, and two-way interactions between these traits and subjective social status were entered simultaneously at step three. Negative and positive urgency both significantly predicted resistance scores in their respective models. The interaction between negative urgency and subjective social status was significant. As shown in Figure 1, participants with high negative urgency scores and low subjective social status showed greater susceptibility to peer influence. Simple slopes analysis (Aiken & West, 1991) indicated that at low levels of status (1 SD below the mean), the slope of resistance on negative urgency was significant (β = -.39, t = -4.24, $p < .001$), whilst at high levels of status (1 SD above the mean), the slope was not significant (β = -.13, t = -1.40, p = .16).

Discussion

This study examined relationships between resistance to peer influence and personality traits reflecting reward sensitivity and impulsivity. Resistance to peer influence was negatively associated with negative and positive urgency, and with the drive and fun seeking components of the Behavioural Activation System scales. The urgency traits remained significant predictors of low resistance when controlling for variance shared with drive and fun-seeking. This finding indicates that susceptibility to peer influence is more closely related to a tendency to act impulsively when in a heightened emotional state than to a heightened motivation for reward, consistent with neurobiological evidence showing that resistance to peer influence is associated with functionality of brain areas linked to emotion regulation (Pfeifer et al., 2011). Those higher in urgency may be less able to regulate their actions when

faced with peer pressure due to the strong affective salience of peer acceptance and rejection (Guyer, Choate, Pine, & Nelson, 2012).

Subjective social status was positively correlated with three traits: drive, fun seeking, and sensation seeking. These traits are also positively associated with trait extraversion, which reflects a consistent desire for socially rewarding stimuli (e.g. Aluja, García, & García, 2003; Carver & White, 1994; Heym, Ferguson, & Lawrence, 2008). Individuals high in these traits may have an enhanced motivation to establish and maintain friendships, leading to an elevated perception of their social status.

The relationship between negative urgency and resistance to peer influence was moderated by subjective social status, such that at low levels of status the negative relationship between these variables was strengthened. As Baumeister et al. (2005) note, socially excluded individuals show cognitive deficits and an emphasis on the present over the future. The effects of low status may compound the already weakened regulatory abilities associated with trait urgency (Cyders & Smith, 2008). In low status, high urgency adolescents, this compromised regulatory capacity may lead to a reduced ability to resist the wishes of others.

A number of limitations affected this study. First, there was a reliance on self-report measures. Although prior reports have found subjective social status to be associated with objective status measures such as number of friendship nominations (Sweeting et al., 2011), and self-reported resistance to peer influence to be associated with delinquency following affiliation with deviant peers (Monahan, Steinberg, & Cauffman, 2009), future studies would benefit from using multiple methods to assess these variables. One option would be to include a performance-based measure of sensitivity to peer influence such as that employed by Prinstein, Brechwald, and Cohen (2011), whereby changes in participants' endorsement of certain behaviours are examined following exposure to experimenter-manipulated social norms. A second limitation was that data were cross-sectional. It is therefore not possible to confirm the direction of influence from traits to susceptibility to peer influence. Third, there was a bias towards female participants. Although gender differences in resistance to peer influence were not found in this sample, previous findings have indicated that females display heightened resistance (Sumter, Bokhorst, Steinberg, & Westenberg, 2009).

Despite these limitations, this is the first study to report associations between resistance to peer influence and specific facets of reward sensitivity and impulsivity. These findings complement neurobiological evidence of individual differences in resistance to peers (Grosbras et al., 2007; Paus et al., 2008), and offer scope for future work. The urgency traits

have been linked to a number of problematic behaviours (Dir, Karyadi, & Cyders, 2013; Stautz & Cooper, 2013; Zapolski, Cyders, & Smith, 2009), some of which may be aggravated by peers. Susceptibility to peer influence may be a mediating factor of these associations, and could be a useful target for intervention.

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